

In the claims:

Amend the claims as follows:

1. (Currently amended) A method for determination of stand
5 attributes by means of a laser scanner and images, in which a
point cloud with three-dimensional information about the
target points and describing the stand is produced by means
of a laser scanner and overlapping images, comprising:
a) producing overlapping images ~~are produced~~ by aerial or
10 terrestrial photography,
producing a point cloud by using a laser scanner,
~~b) densifying the point cloud with three-dimensional~~
~~information from the overlapping images to produce a denser~~
~~point cloud with more target points with three-dimensional~~
15 ~~information is produced by densifying the point cloud~~
~~produced by the laser scanner with information from the~~
~~overlapping images produced by the aerial or terrestrial~~
~~photography, and~~
e) determining ~~the~~ stand attributes by means of the densified
20 point cloud.
2. (Currently amended) The method according to claim 1
wherein ~~after step a),~~ the point cloud ~~produced by laser~~
~~scanning and the image information~~ and the overlapping images
25 are combined to belong to the same target.
3. (Previously presented) The method according to claim 1
wherein the three-dimensional information of the point cloud
produced by means of a laser scanner is formed of three-
30 dimensional coordinates for the target points.
4. (Currently amended) The method according to claim 1
wherein ~~for step e),~~ the points measured from ~~the~~ a surface
of the terrain and ~~the~~ points measured above the surface of

the terrain are distinguished from the point cloud produced by laser scanning, and three-dimensional points are added close to those points that are produced by a laser scanner and that correspond to points measured above the surface of the terrain.

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5. (Currently amended) The method according to claim 1 wherein in order to determine three-dimensional ~~coordinated~~ coordinates for the target points the data achieved from the laser measurements and the image information of the aerial or terrestrial photography are calculated into the same coordination system.

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6. (Currently amended) The method according to claim 1 wherein ~~in step b)~~, the three-dimensional target coordinates of the additional points are determined from the overlapping images produced by aerial or terrestrial photography by means of photogrammetric methods.

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7. (Currently amended) The method according to claim 1 wherein ~~step c)~~ the step of determining is performed by means of a pattern recognition method, by determination of models describing the crowns of the stand and the terrain, or by means of coordinate information.

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8. (Previously presented) The method according to claim 1 wherein such a number of target points is applied that individual trees and groups of trees are discriminated.

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9. (Currently amended) The method according to claim 1 wherein ~~in step a)~~, brightness values are produced for the points in addition to the three-dimensional coordinates by means of a camera or spectrometry.

10. (Previously presented) The method according to claim 1 wherein the laser scanner material used for the creation of a denser point cloud has several pulses modes or profile data.

5 11. (Previously presented) The method according to claim 1 wherein a three-dimensional presentation of the stand height is achieved by calculating, from the denser point cloud, the difference between a crown model corresponding to the upper parts of the stand and a digital terrain model corresponding
10 to the surface of the terrain.

12. (Previously presented) The method according to claim 1 wherein an anisotropy correction for the brightness values of an image is done for individual trees or groups of trees by
15 means of the denser point cloud by using a crown model created by means of the denser point cloud.

13. (Currently amended) The method according to claim 1 wherein a change in the stand can be calculated by means of
20 denser point clouds or by means of surface models corresponding to them achieved at two different time points,
~~the change consisting of for instance a height or breadth growth, thinnings and fallen trees.~~

25 14. (Previously presented) The method according to claim 1 wherein the identification of individual trees or groups of trees is done by using the denser point cloud, the height model, surface models, intensity data of the laser scanning, profile data and/or brightness values of the images by means
30 of a known pattern recognition method.

15. (Previously presented) The method according to claim 1 wherein the identification of individual trees or groups of trees takes place by using images and the height for a

desired tree is achieved by means of denser point cloud material.

5 16. (Previously presented) The method according to claim 1 wherein old inventory information, earlier images and/or laser materials is used for evaluation or updating of stand attributes.

10 17. (Previously presented) The method according to claim 1 wherein the tree geometry and/or the delineation of the tree is determined by means of sample points achieved inside the area restricted by the tree either two-dimensionally or three-dimensionally in order to identify the tree species or for modeling of the stand.

15 18. (Previously presented) The method according to claim 1 wherein the attributes of individual trees or groups of trees, which are achieved by analyzing the canopy height model, are the location of the trees, age, height, crown diameter, crown delineation, stem diameter, quality of timber wood, tree value, basal area, crown closure percentage, 20 development class, tree species, stem volume, and/or stem number per area unit and statistical attributes that are be derived by means of this information.

25 19. (Previously presented) The method according to claim 1 wherein the stem diameter of the tree can be derived by means of the mean diameter of the crown or the tree height and the mean diameter of the crown and by making use of rules based on knowledge and possible for each tree species separately. 30

20. (Previously presented) The method according to claim 18 wherein the stem number is determined as a number of crowns determined from a image or point cloud.

21. (Previously presented) The method according to claim 1 wherein the crown coverage percentage is defined as the relation between the area covered by the crowns and the whole surface.

22. (Previously presented) The method according to claim 1 wherein in addition to attributes of individual trees of groups of trees and statistical data for these, also a stem number and the crown coverage percentage of a stand that is seen from above, are defined for a larger tree group, and this information is used in the estimation of attributes for sample plots and stands.

23. (Previously presented) The method according to claim 1 wherein the stand volume is completely or partly defined by means of the mean height of the stand and the crown coverage percentage.

24. (Previously presented) The method according to claim 1 wherein the definition of stand attributes is performed by means of a computer program.

25. (Currently amended) A computer program of a computer for the determination of stand attributes from information achieved by means of a laser scanner and images and in which there is produced a point cloud with three-dimensional information about the target points and describing the stand, comprising: with the computer program of the computer,

a) ~~there is produced~~ producing a denser point cloud with more target points and three-dimensional information by densifying the point cloud produced by the laser scanner with information from overlapping images produced by aerial or terrestrial photography, and

b) determining the stand attributes ~~are determined~~ by means of the denser point cloud.

26. (Canceled)